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SOURCE

Vestmik Akademii Nauk SSSR, No 5, 1951, p 42.

## STALIN PRIZES AWARDED NEVELOPERS OF LUMINESCENT LAMPS

The following schenbists and their co-workers have received a Stelin Prize Second Class for their development of luminescent lamps:

Academician Sergey Ivenovich Vavilov, deceased, in charge of the project; Vadim Leonidovich Levship, Douter of Physicomathematical Sciences and deputy director of the Physics Institute theat P. N. Lebedev; and Mariya Aleksandrovna Konstantinova, Dotter of Chemical Sitemes and senior scientific associate at the same institute.

Under Vavilor's general direction research was carried on by associates at the Physics Institute iment P. N. Lebadev, Academy of Sciences USSR; the Moscow Power-Engineering Institute iment V. M. Molotov; the All-Union Electrical-Engineering Institute imeni V. I. Lenth, the State Optical Institute imeni S. I. Vavilor; and a featory of the Ministry of Communications Equipment Industry.

The study, in the above-indicated research institutes, of a large number of theoretical problems concercing the physics of luminophores and gaseous discharge preceded the creation of these lamps. As a result of these investigations, the technology was worked out, and the first models of lamps, ready to be handed over to industry, were obtained. Their further ps ection and industrial introduction was carried our in cooperation with the factory.

In luminescent lamps the energy of an electric discharge occurring in rarefied vapors of mercury as transformed arto ultraviolet radiation of mercury. This radiation is absorbed by the luminescent substance applied to the interior walls of tube-like lamps. The luminescent material transforms the absorbed ultraviolet radiation of mercury vapors into visible light without the necessity for an intervening process in which the substance is heated.

Emission of light of luminescent lamps is two to three times greater than in ordinary incandescent lamps. The service time of luminescent lamps surpasses by several times that of incandescent lamps. Moreover, luminescent lamps make

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it possible to change extensively the spectral composition of radiation, in relation to technical requirements, without significant losses in the amount of light emitted.

Luminescent 'amps are used as sources of artificial daytime light in the textile and printing industries, art galleries, subway stations, and mining industry. In the near future they will undoubtedly be widely used to light industrial installations, as well as homes and other places of daily living.

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